<u>CLAIMS</u>

<u>Listing of Claims in the Case:</u>

1.   (Original) A method for facilitating circuit design, said method comprising:

a) receiving inputs to configure said circuit, said circuit implementing a plurality of modules; and

b) generating at least two elements selected from the group consisting of: an application programming interface (API) for programming an operation of a first of said modules, source code for realizing said plurality of modules in hardware, an interrupt vector table having a call to an interrupt service routine for said first of said modules, and a data sheet for said circuit, wherein said circuit comprises said plurality of modules.

2.   (Original) The method of designing a circuit of Claim 1, wherein b) comprises:

generating at least three elements selected from said group.

3.   (Original)The method of designing a circuit of Claim 1, wherein b) comprises generating:

said application programming interface (API) for programming said operation of said first of said modules, said source code for realizing said plurality of modules in said hardware, said interrupt vector table having

said call to said interrupt service routine for said first of said modules, and

said data sheet for said circuit, wherein said circuit comprises said plurality

of modules.

4.   (Original)The method of Claim 1, wherein said inputs to configure

said circuit comprise parameters for said modules.

5.   (Original)The method of Claim 1, wherein said inputs to configure

said circuit comprise placements for said modules in a graphical user

interface describing resources operable to implement said modules.

6.   (Original)The method of Claim 1 wherein said datasheet is a

Hypertext Markup Language (HTML) document.

7.   (Original)The method of Claim 6, wherein said datasheet is generated

dynamically from a plurality of Extensible Markup Language (XML) files.

8.   (Original)The method of Claim 7, wherein said plurality of Extensible

Markup Language (XML) files comprise module files that describe said

modules and a device description file that describes resources operable to

implement said modules.

9. (Original)The method of Claim 8, wherein said resources are implemented in a microcontroller.

10. (Original)The method of Claim 1, wherein said source code is operable to program a microcontroller to implement said modules.

11. (Original)The method of Claim 1, wherein said source code is derived from the placement of said modules in a graphical user interface that describes resources operable to implement said modules.

12. (Original)The method of Claim 1, wherein said source code is derived from parameters of said modules, said parameters being inputs to configure said circuit.

13. (Original)A computer-readable medium having stored thereon instructions to implement a method of facilitating circuit design, said method comprising:

a) receiving inputs to configure said circuit, said circuit implementing a plurality of modules; and

b) generating at least two elements selected from the group consisting of: an application programming interface (API) for programming a function of a first of said modules, source code for realizing said plurality of modules in hardware, an interrupt vector to an interrupt service routine for said first

of said modules, and a data sheet for said circuit, wherein said circuit comprises said plurality of modules.

14.   (Original)The computer-readable medium of Claim 13, wherein b) of said method comprises generating at least three elements selected from said group.

15.   (Original)The computer-readable medium of Claim 13, wherein b) of said method comprises generating:

said application programming interface (API) for programming said function of said first of said modules, said source code for realizing said plurality of modules in said hardware, said interrupt to said interrupt service routine for said first of said modules, and said data sheet for said circuit, wherein said circuit comprises said plurality of modules.

16.   (Original)The computer-readable medium of Claim 13, wherein said inputs to configure said circuit comprise parameters for said modules and placements for said modules in a graphical user interface describing resources operable to implement said modules.

17.   (Original)The computer-readable medium of Claim 13, wherein said datasheet is a Hypertext Markup Language (HTML) document.

18.   (Original)The computer-readable medium of Claim 13, wherein said datasheet is generated from a plurality of Extensible Markup Language (XML) files describing said modules and an XML device description file that describes resources operable to implement said modules.

19.   (Original)The computer-readable medium of Claim 13, wherein b) of said method comprises conditionally compiling said API based on said inputs to configure said circuit.

20.   (Original)The computer-readable medium of Claim 13, wherein said source code is operable to program a microcontroller to implement said modules.

21.   (Original)The computer-readable medium of Claim 13, wherein said source code is derived from the placement of said modules in a graphical user interface that describes resources operable to implement said modules and parameters of said modules, said parameters being inputs to configure said circuit.

22.   (Original)A system comprising a processor coupled to a bus and a computer-readable medium coupled to said bus, said computer readable

medium having stored thereon instructions, which when run on said

processor perform a method of designing a circuit, said method comprising:

a) receiving inputs to configure said circuit, said circuit implementing

a plurality of modules; and

b) generating at least two elements selected from the group consisting

of: application programming interfaces (APIs) for programming an

operation of at least one of said modules, source code for realizing said

plurality of modules in hardware, an interrupt vector table having a call to

an interrupt service routine for at least one of said modules, and a data sheet

for said circuit, wherein said circuit comprises said plurality of modules.

23.   (Original)The system of Claim 22, wherein b) of said method

comprises generating at least three elements selected from said group.

24.   (Original)The system of Claim 22, wherein b) of said method

comprises generating:

said application programming interface (API) for programming

said function of said first of said modules, said source code for

realizing said plurality of modules in said hardware, said interrupt to

said interrupt service routine for said first of said modules, and said

data sheet for said circuit, wherein said circuit comprises said

plurality of modules.

25.   (Original)The system of Claim 22, wherein said inputs to configure said circuit comprise parameters for said modules and placements for said modules in a graphical user interface representing resources operable to implement said modules.

26.   (Original)The system of Claim 22, wherein said datasheet is a Hypertext Markup Language (HTML) document.

27.   (Original)The system of Claim 22, wherein said data sheet is generated from a plurality of Extensible Markup Language (XML) files describing said modules and an XML device description file that describes resources operable to implement said modules.

28.   (Original)The system of Claim 27, wherein said resources are implemented in a microcontroller.

29.   (Original)The system of Claim 22, wherein said source code is operable to program a microcontroller to implement said modules.

30.   (Original)The system of Claim 22, wherein said source code is derived from the placement of said modules in a graphical user interface that describes resources operable to implement said modules and from

parameters of said modules, said parameters being inputs to configure said

circuit.

31. (Original)The system of Claim 22, wherein b) of said method

comprises conditionally compiling a first of said APIs based on said inputs

to configure said circuit.

32. (Original)The system of Claim 22, wherein said application

programming interfaces comprise a function call, said call operable to cause

a first module of said modules to perform a predetermined function.

33. (Original)The system of Claim 22, wherein said application

programming interfaces comprise an interrupt service routine for a first of

said modules.

34. (Original)The system of Claim 22, wherein said system comprises a

graphical user interface for displaying representations of resources

operable to implement said modules.

35. (Original)The system of Claim 34, wherein b) comprises

automatically inserting, in said interrupt vector table, a call to said

interrupt service routine, said interrupt service routine servicing a module

placed in said graphical user interface, wherein said call is inserted in said

interrupt vector table based on inputs to configure said circuit.